REMARKS

Claims 1-20 remain pending in this application. Claims 1-20 are rejected.

Claims 1-20 are rejected as obvious over the Nonaka reference under 35 U.S.C. §103(a). The applicant herein respectfully traverses this rejection. For a rejection under 35 U.S.C. §103(a) to be sustained, the differences between the features of the combined references and the present invention must be obvious to one skilled in the art.

It is respectfully submitted that a *prima facie* case of obviousness has not been established in the rejection of claims 1-20. "To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on the applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)." MPEP §706.02(j) "Contents of a 35 U.S.C. §103 Rejection".

Claim 1 recites the following feature not found in the cited reference:

> a control circuit for receiving and processing said sensor output and for turning off said power-supply switch when said control circuit accepts the sensor output from said sensor.

In the Office Action the Examiner theorizes that it would be inherent for the device of the reference to have a power supply switch.

The concept that a reference inherently discloses material anticipating a claimed invention may not be relied upon where the consequences of following the reference disclosure does not always inherently produce the results of the claimed invention. *W.L. Gore Assoc., Inc. v. Garlock, Inc.*, 220 USPQ 303, 314 (Fed. Cir. 1983). It is respectfully submitted that one following the teachings of the cited reference would not arrive at the claimed invention with any certainty.

Claim 1 requires that a switch be used to supply to a *sensor* and that the switch be *controlled by a controller*. This claimed switch is clearly not inherent in the Nonaka reference. In the Office Action it is noted that sensors 8 and 10 are connected to a CPU and it is then stated that it is inherent that this or any device have power inputs to function. First, it is not necessarily so that all sensors have power inputs since photovoltaic sensors convert light itself to a voltage which is measured and therefore actually produce power from the light. Second, the schematic of the Nonaka reference is a typical logical schematic which omits power

connections in order to more clearly present the device. Hence, no switch for power is shown and in particular, no switch which is controlled by the CPU and delivers power to the sensors 8 and 10 is shown. Furthermore, it is not at all necessary that the device of Nonaka have a CPU controlled switch for power since such power may be manually switched. Thus, one could readily produce a device based on the Nonaka disclosure with a manually controlled switch.

Finally, the Office Action cites col. 6, lines 31-32, for teaching that the control circuit "turns off the power switch in order to conserve energy." The cited portion actually reads as follows:

> Unwanted auxiliary light is not projected to avoid energy waste of the power supply.

Thus, the reference teaches that a light projecting unit 24 is turned off, not that the sensors 8 and 10 are turned off. Hence, the cited reference fails to expressly teach the subject matter of claim 1. Furthermore, the reference does not inherently teach such subject matter because, without a suggestion to do otherwise provided in the reference, one skilled in the art would certainly not produce a device wherein a controller turns off power to a sensor since such sensors are typically fixedly connected in common with the controller to a power source which is switched to turn off the entire device, not just the sensor. This is why such power distribution is not shown in the reference.

Independent claim 5 recites subject matter similar to claim 1 relating to a control circuit for switching off power supplied to a sensor once output is received from the sensor. Such subject matter is not taught by the reference as related above.

With regard to claim 14, and claims 6, 7 and 16, the Nonaka reference also clearly fails to teach controlling power applied to a data line for receiving data from a sensor module when the sensor module sends a signal signifying the start of output. Nor does it teach disabling the data line after completion.

With reference to claim 6, the Office Action states that the Nonaka reference teaches a switch for enabling reading at column 8, lines 25-30. However, this portion of the reference indicates that output from a sensor is switched to one of two processing circuits and does not relate to enabling a data line. The output from the sensor is an analog signal that must first be processed by the processing and detecting circuits, 40 and 28, to be converted in data that is digitally input to the CPU. Thus, the reference fails to teach the claimed switching for enabling a data line as data lines extend from the remote control processing circuit and the light quantity detecting unit unbroken to the CPU in Fig. 4 of Nonaka.

Thus, it is respectfully submitted that the rejected claims are not obvious in view of the cited reference for the reasons stated above. Reconsideration of the rejections of claims 1-20 and their allowance are respectfully requested.

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For the convenience of the Examiner, APPENDIX I is provided herewith having a complete set of pending claims with all amendments effected therein.

In light of the foregoing, the application is now believed to be in proper form for allowance of all claims and notice to that effect is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

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APPENDIX I

ALL PENDING CLAIMS

1. (Amended) A sensor system comprising:

a sensor having a sensor power input and an output for supplying a sensor output;

a controller including:

a power-supply switch for switching on or off a supply of electrical power to said sensor power input; and

a control circuit for receiving and processing said sensor output and for turning off said power-supply switch when said control circuit accepts the sensor output from said sensor.

2. (Amended) The sensor system of claim 1, wherein said sensor is a distance measurement sensor including a light projection means, a driver circuit for supplying an emission signal to said light projection means, and a light-receiving means for receiving light arising from light projected from said light projection means, and wherein said controller starts acceptance of the sensor output from said sensor according to said emission signal.

3. (Amended) The sensor system of claim 2, wherein:

said sensor includes an open collector type output terminal as said output for producing said sensor output,

said controller further includes a series combination of a resistor and a switching means,

said series combination is connected between said output terminal and a power supply, and a voltage developed at a terminal between said series combination and said output terminal is accepted as the sensor output from said sensor, and

said control circuit turns on or off said switching means based on operation of said emission signal.

4. (Amended) The sensor system of any one of claims 1 to 3, wherein said controller enters a standby state of low power consumption in response to an end of said processing of said sensor output.

5. A sensor system comprising:

a sensor module having a sensor module power input and an output for supplying a sensor module output;

a sensor module power-supply switch for switching on or off a supply of electrical power to said sensor module power input;

a control circuit for receiving and processing said sensor module output and providing a processed output; and

said control circuit including means for detecting completion of reception of said sensor module output and for turning off said sensor module power-supply switch in response to the detection of completion and prior to said control circuit processing said sensor module output.

6. The sensor system of claim 5 wherein:

said sensor module includes:

a sensor element; and

a sensing circuit for processing an output signal from said sensor element to provide said sensor module output and for outputting an output indicating signal signifying a start of output of said sensor module output;

said control circuit including:

a data line switch controlling power to a data line receiving said sensor module output to enable reading of said sensor module output; and

a data line control means for setting said data line switch to enable reading of said sensor module output in response to receiving said output indicating signal.

7. The sensor system of claim 6 wherein said data line control means sets said data line switch to disable reading said sensor module output in response to the detection of completion and prior to said control circuit processing said sensor module output.

8. The sensor system of claim 7 wherein said sensor module includes:

an emitting element for sending out an emission to be sensed by said sensor element; and

said sensing circuit including a drive circuit producing a drive signal for driving said emitting element and driving generation of said output indicating signal.

9. The sensor system of claim 8 wherein said drive signal and said output indicating signal are formed of a number of pulses and said data line control means recognizes completion of said number of pulses to set said data line switch to enable reading of said sensor module output.

10. The sensor system of claim 8 wherein said emitting element is a light generating device and said sensor element is a light detecting device.

11. The sensor system of claim 7 wherein said sensor module includes:

an emitting element for sending out an emission to be sensed by said sensor element; and

said sensing circuit including a first output supplying said output indicating signal and a second output for a drive circuit to output a drive signal for driving said emitting element.

12. The sensor system of claim 11 wherein said emitting element is a light generating device and said sensor element is a light detecting device.

13. The sensor system of claim 7 wherein said sensor module includes:

an emitting element for sending out an emission of light to be sensed by said sensor element;

said sensing circuit including a drive circuit to output a drive signal for driving said emitting element; and

said sensor element is a light detection device.

14. A sensor system comprising:

a sensor module including:

a sensor element; and

a sensing circuit for processing an output signal from said sensor element to provide a sensor module output and for outputting an output indicating signal signifying a start of output of said sensor module output; and

a control circuit for receiving and processing said sensor module output and providing a processed output, said control circuit including:

a data line switch controlling power to a data line receiving said sensor module output to enable reading of said sensor module output; and

a data line control means for setting said data line switch to enable reading of said sensor module output in response to receiving said output indicating signal.

15. The sensor system of claim 14 wherein said sensor module includes:

an emitting element for sending out an emission to be sensed by said sensor element;

said sensing circuit including a drive circuit producing a drive signal for driving said emitting element and driving generation of said output indicating signal.

16. The sensor system of claim 14 wherein:

said control circuit include means for detecting completion of reception of said sensor module output; and

said data line control means sets said data line switch to disable reading said sensor module output in response to the detection of completion and prior to said control circuit processing said sensor module output.

17. The sensor system of claim 16 wherein said sensor module includes:

an emitting element for sending out an emission to be sensed by said sensor element; and

said sensing circuit including a drive circuit producing a drive signal for driving said emitting element and driving generation of said output indicating signal.

18. The sensor system of claim 17 wherein said drive signal and said output indicating signal are formed of a number of pulses and said data line control means recognizes completion of said number of pulses to set said data line switch to enable reading of said sensor module output.

19. The sensor system of claim 17 wherein said emitting element is a light generating device and said sensor element is a light detecting device.

20. The sensor system of claim 16 wherein said sensor module includes:

an emitting element for sending out an emission to be sensed by said sensor element; and

said sensing circuit including a first output supplying said output indicating signal and a second output for a drive circuit to output a drive signal for driving said emitting element.